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## **A biological perspective on the meaning of time**

We have become impatient waiting for a web page to load, but the first member of our species evolved about 150,000 years ago – a geological instant as brief and as transitory as a text message. The shortest generation time of a bacterium is a sprint at under ten minutes, whereas a 200-year old whale, turtle or tree is not unknown. Life is a phenomenon that integrates processes ranging from the near instantaneous reactions of photosynthesis to the more stately pace of evolution. Here I will elucidate these processes with radically different time scales that go to creating and maintaining the diversity of life on earth, the clocks that nature uses to time them, and how modern biology is being used to alter the natural time scales.